

REMARKS

By this amendment, Applicants amend claims 1, 18, 19, and 20. Claims 1-20 remain pending in this application.

In the Final Office Action¹, the Examiner took the following actions:

rejected claims 1-5 and 7-20 under 35 U.S.C. § 102(b) as being anticipated by Nagai et al. ("Estimation of Source Location Based on 2-D Music and its Application to Speech Recognition in Cars"); and

rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Nagai in view of Amiri et al. (U.S. Patent Application Publication No. 2002/0001389).

I. REJECTION OF CLAIMS 1-5 AND 7-20 UNDER § 102(b)

Applicants respectfully traverse the rejection of claims 1-5 and 7-20 under 35 U.S.C. § 102(b) as being anticipated by Nagai. Nagai does not teach each and every element of Applicants' claims for at least the following reasons.

To properly anticipate Applicants' claimed invention, the Examiner must demonstrate the presence of each and every element of the claim in issue, either expressly described or under principles of inherency, in a single prior art reference. Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." *See M.P.E.P. § 2131, quoting Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Finally, "[t]he elements must be arranged as required by the claim." M.P.E.P. § 2131. In this

¹ The Final Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Final Office Action.

application, the rejection is improper because the Examiner has not demonstrated the presence of each and every element of Applicant's claims.

Amended independent claim 1 recites a directional setting apparatus comprising, among other things, "a voice recognition unit which detects a certain voice included in the sound signal outputted from the microphone array and **sets a directional determination period indicating a detection period of said certain voice**, if it is determined that the certain keyword is included" and "a voice direction detector which detects an **occurrence direction** of said certain voice included in the sound signals outputted from the plurality of microphones in **said directional determination period**" (emphases added). Nagai does not teach at least these elements of amended independent claim 1.

In the "Response to Arguments" section of the Final Office Action, the Examiner contends that Nagai "discloses a voice direction detector (HE-2D MUSIC in fig. 1) which detects occurrence direction of said certain voice in said directional determination period," citing Figs. 1-2 and 4; pages 3041-3043. See page 8. The Examiner's contention is incorrect for at least the following reasons.

In the Nagai system, a car driver and a passenger can control car electronics, such as a navigation system, car audio, and a hands-free mobile phone, by speech. See p. 3041 ("Introduction"). For example, the Nagai system may recognize voices of multiple persons, such as the car driver and the passenger. See p. 3041 ("Introduction"). Furthermore, Nagai appears to show in FIG. 4 that microphones are arranged at equal intervals to collect voice information from persons inside of the car. See p. 3043. However, Nagai does not disclose setting a time period in which voice

recognition is performed. That is, Nagai does not teach setting the claimed “directional determination period indicating a detection period of said certain voice.” Furthermore, Nagai also does not teach detecting an occurrence direction of a voice during the set “directional determination period.” Moreover, the Examiner has not pointed to any teaching in Nagai that constitutes setting the claimed “directional determination period” or detecting an occurrence direction during the set “directional determination period.” Accordingly, as outlined above, Nagai does not teach at least “a voice recognition unit which detects a certain voice included in the sound signal outputted from the microphone array and **sets a directional determination period indicating a detection period of said certain voice**, if it is determined that the certain keyword is included” and “a voice direction detector which detects an **occurrence direction** of said certain voice included in the sound signals outputted from the plurality of microphones in **said directional determination period**,” as recited in amended independent claim 1 (emphases added).

For at least the above reasons, Nagai does not teach each and every element of claim 1 and, accordingly, the reference does not anticipate the claim. Furthermore, claims 2-5 and 7-17 depend from claim 1 and are not anticipated by Nagai at least due to their dependence. Independent claims 18, 19, and 20, although of a different scope from claim 1 and each other, are amended to include similar recitations as claim 1. Accordingly, claims 18, 19, and 20 are not anticipated by Nagai for at least the reasons discussed above in connection with claim 1. Therefore, the Examiner should withdraw the rejection of claims 1-5 and 7-20 under 35 U.S.C. § 102(b).

II. REJECTION OF CLAIM 6 UNDER § 103(a)

Applicants respectfully traverse the rejection of claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Nagai in view of Amiri. A *prima facie* case of obviousness has not been established for at least the following reasons.

The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. See M.P.E.P. § 2142, 8th Ed., Rev. 6 (Sept. 2007). Such an analysis should be made explicit and cannot be premised upon mere conclusory statements. See id. “A conclusion of obviousness requires that the reference(s) relied upon be enabling in that it put the public in possession of the claimed invention.” M.P.E.P. § 2145. Furthermore, “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art” at the time the invention was made. M.P.E.P. § 2143.01(III), internal citation omitted. Moreover, “[i]n determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious.” M.P.E.P. § 2141.02(I), internal citations omitted (emphasis in original).

“[T]he framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1996) . . . The factual inquires . . . [include determining the scope and content of the prior art and] . . . [a]scertaining the differences between the claimed invention and the prior art.” M.P.E.P. § 2141(II). “Office personnel must explain why the difference(s) between the

prior art and the claimed invention would have been obvious to one of ordinary skill in the art." M.P.E.P. § 2141(III). In this application, a *prima facie* case of obviousness has not been established because the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the claimed invention and the prior art. Accordingly, the Office Action has not clearly articulate a reason why the prior art would have rendered the claimed invention obvious to one of ordinary skill in the art.

Claim 6 depends from claim 1 and, accordingly, includes all elements thereof. As discussed above, Nagai does not disclose or suggest each and every element of claim 1, from which claim 6 depends. Amiri does not compensate for the deficiencies of Nagai that were discussed above. Instead, the Examiner alleges that Amiri teaches "an apparatus for locating a talker, in which a position estimate is used by a steering device, wherein the steering device is an image tracking algorithm to track the image of the sound source." See Final Office Action at page 7. Even if the Examiner's allegation is correct, which Applicants do not concede, Amiri also does not teach or suggest at least "a voice recognition unit which detects a certain voice included in the sound signal outputted from the microphone array and sets a directional determination period indicating a detection period of said certain voice, if it is determined that the certain keyword is included" and "a voice direction detector which detects an occurrence direction of said certain voice included in the sound signals outputted from the plurality of microphones in said directional determination period," as recited in amended independent claim 1.

In view of the above, the Final Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the claimed invention. Furthermore, no reason has been clearly articulated as to why the claim would have been obvious to one of ordinary skill in view of the prior art. Accordingly, the cited prior art does not render obvious claim 6 at least due to its dependence from independent claim 1 and a *prima facie* case of obviousness has not been established. Therefore, the Examiner should withdraw the rejection of claim 6 under 35 U.S.C. § 103(a).

CONCLUSION

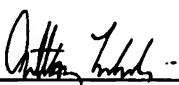
In view of the foregoing, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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